

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 5

REMARKS

I. Status of the Application.

Claims 1-6 and 8-19 of the Application were pending as of the date of the Office Action.

In the Office Action, the Examiner:

- (a) Rejected claims 14-16 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 3,959,431 to Nissel ("Nissel");
- (b) Rejected claims 1-6 and 8-10 under 35 U.S.C. §103(a) as being allegedly obvious over U.S. Patent No. 5,798,151 to Andersen ("Andersen") in view of U.S. Patent No. 3,821,868 to Edwards ("Edwards");
- (c) Rejected claims 11-13 under 35 U.S.C. §103(a) as being allegedly obvious over Andersen in view of Edwards in further view of U.S. Patent No. 3,832,250 to Pearson ("Pearson") and U.S. Patent No. 3,527,447 to Kinkade ("Kinkade"); and
- (d) Rejected claims 17-19 under 35 U.S.C. §103(a) as being allegedly obvious over Nissel in view of Andersen in further view of Edwards.

In this Response, Applicant amends claims 1 and 14. Applicant respectfully submits that the foregoing amendments and following remarks incorporated herein overcome the Examiner's rejections of the Application.

II. Applicant's Amendments Do Not Constitute New Matter.

Applicant respectfully submits that the amendments to claims 1 and 14 do not add new matter to the Application. The amendments to the claims are supported by the figures as originally filed and generally by the original specification. For example, and among other places, the amendments are supported in paragraphs [0020-0021, 0028, 0031, 0043-0046, 0059-0072] of

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 6

the specification. Applicant respectfully submits that all the amendments are supported by the specification, as originally filed, and do not constitute new matter. Accordingly, Applicant respectfully requests entry of these amendments.

III. The Rejection Of Claims 14-16 Under 35 U.S.C. §102(b) As Being Anticipated By Nissel Should Be Withdrawn.

Applicant respectfully submits that the rejections of claims 14-16 under 35 U.S.C. §102(b) should be withdrawn because Nissel does not disclose all the limitations of claims 14-16. A rejection under 102(b) can be overcome by showing that the prior art does not disclose all the limitations of the claims. MPEP §706.02(b). Nissel discloses an apparatus for making a multiple layer laminated sheet that comprises an extruder 21 with an input hopper 23 and a discharge 24 serially connected to an adaptor 22 and a sheet-forming die 19. (Col. 3, ll. 45-68, Col. 4, ll. 1-9). Nissel has a lateral feed tube 37 connected to the adaptor 22 in order to inject a second substance into the adaptor to create a multiple-layered laminate. (Col. 3, ll. 19-68; Col. 4, ll. 1-23). In contrast, the claimed invention of claim 14 comprises an "apparatus for producing a gypsum wallboard core, the apparatus comprising . . . an extrusion die having . . . at least one secondary inlet connected to and in fluid communication with the extrusion die for the introduction of at least one gypsum slurry additive, which is an emulsion or fluid, directly to the extrusion die so that the gypsum slurry additive can be added to a gypsum slurry passing through the extrusion die."

Applicant respectfully submits that the sheet forming die of Nissel does not have such a secondary inlet connected to the die and does not allow for a gypsum slurry additive to be added to a gypsum slurry passing through the extrusion die. Accordingly, Applicant respectfully

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 7

requests that the rejection of claims 14-16 under 35 U.S.C. §102(b) as being anticipated by Nissel be withdrawn because Nissel does not disclose all the limitations of amended claim 14. Moreover, Applicant respectfully submits that the rejections of claims 15-16 should be withdrawn because claims 15-16 depend from and incorporate all the limitations of claim 14.

IV. The Rejections Of Claims 1-6, 8-13 And 17-19 Under 35 U.S.C. §103(a) Should Be Withdrawn.

Applicant respectfully submits that the rejection of claims 1-6, 8-13, and 17-19 under 35 U.S.C. §103(a) should also be withdrawn because none of the prior art references teach or suggest all the limitations of independent claims 1 and 14. Three criteria must be met to establish a *prima facie* case of obviousness: (i) there must be some suggestion or motivation to combine the teachings of two or more prior art references; (ii) there must be a reasonable expectation of success; and (iii) "all of the claim limitations must be taught or suggested by the prior art." MPEP §§ 2143 and 2143.03 (citing *In re Royka*, 490 F.2d 981 (C.C.P.A. 1974)). "If an independent claim is not obvious under 35 U.S.C. §103, then any claim depending therefrom is not obvious." MPEP 2143.03 (citing *In re Fine*, 837 F.2d 1382, 1385 (C.C.P.A. 1970)).

A. The Rejection Of Claims 1-6 And 8-10 Under 35 U.S.C. §103(a) As Being Obvious Over Andersen In View Of Edwards Should Be Withdrawn.

Applicant respectfully submits that the rejection of claims 1-6 and 8-10 under 35 U.S.C. §103(a) as being obvious over Andersen in view of Edwards should be withdrawn because neither Andersen nor Edwards disclose, teach or suggest all the limitations of independent claim 1. Andersen discloses and teaches methods and apparatus for continuously extruding a hydraulically settable matrix (including gypsum) that contains continuous filaments and articles

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 8

formed by those methods and apparatus. (Col. 53, ll. 30-47). Andersen states that "the primary novel feature" of the invention involves the "[i]ntroduction of filaments during the extrusion process [by] . . . placing the filaments in the mixture, which encases and draws the filaments in the hydraulically settable mixture along in the extrusion direction." (Emphasis added; Col. 9, ll. 13-20). The apparatus disclosed by Andersen "comprises a means for continuously placing filaments within an extruding hydraulically settable mixture which are in direct communication with a filament placement chamber, which is an interior chamber of an extruder." (Col. 10, ll. 20-23).

The Examiner cites Edwards for the offering that wallboard, drywall, decorating paneling or the like is well known to be produced in panels that are 8 feet high, 4 feet wide, and three-eighths of an inch thick. As discussed in relation to Shepherd in Applicant's previous responses, Applicant does not dispute that such dimensions are known for wallboard nor that the prior art, including Edwards, discloses wallboard with such dimensions. Rather, Applicant merely points out that the pending claims are not directed to wallboard with such dimensions but are instead directed towards an "**extrusion die comprising a . . . die exit (that) is dimensioned to have a ratio of width to thickness of about 48:1 to about 216:1, so that a slurry passing through the extrusion die is extruded at a substantially similar thickness and width of the finished gypsum wallboard.**" As noted in the Application, typical extrusion dies used in conventional gypsum wallboard manufacturing processes do not possess cross-sectional dimensions in this range. (Application, paragraph [0044]).

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 9

Edwards does not even discuss an extrusion die for producing wallboard and Andersen does not discuss the dimensions of its die. Applicant respectfully submits that if neither of the cited references discuss the dimensions of an extrusion die for producing wallboard then there can be no teaching or suggestion drawn upon from Edwards and Andersen to combine the references to make a die with the claimed dimensions. As discussed in the Manual of Patent Examination, the suggestion to make the claimed combination must come from the prior art and not from the applicant's disclosure or from the level of skill of the art. *Id.* (citing *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991)); MPEP §2143.01 (citing *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999)). Applicant respectfully submits that nothing in Edwards or Andersen discuss, teach or suggest a die with substantially similar width and thickness to the final produced wallboard. Accordingly, Applicant respectfully submits that there is no suggestion or motivation to combine the references to come up with the claimed invention. Moreover, even if motivation existed to combine the references, the combination of Edwards with Anderson still does not disclose, teach or suggest an "extrusion die comprising a . . . die exit (that) is dimensioned to have a ratio of width to thickness of about 48:1 to about 216:1, so that a slurry passing through the extrusion die is extruded at a substantially similar thickness and width of the finished gypsum wallboard." Thus, Applicant respectfully submits the pending claims are unobvious and the rejections under 35 U.S.C. §103(a) should be withdrawn.

Further, even if the Examiner is correct in his assumption that it would be obvious to size the Andersen die in the dimensions of the final wallboard discussed in Edwards, the combination of the references still does not disclose, teach or suggest the "secondary inlet" limitations of the

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 10

pending claims. The pending claims are directed to an apparatus that allows for the formation of a gypsum core with additives in order to prevent fouling, plugging, premature setting, or other detrimental effects to mixers and tubing used to prepare and convey a slurry. (*See* Application, paragraph [0020]). The claims describe apparatuses for forming a gypsum wallboard core comprising "at least one secondary inlet connected to and in fluid communication with the extrusion die for the introduction of at least one gypsum slurry additive, which is an emulsion or fluid, directly to the extrusion die, so that the gypsum slurry additive can be added to a gypsum slurry passing through the extrusion die" (*See*, claim 1). The Application clearly establishes that the use of an extrusion die with such inlets for introducing chemical additives into the gypsum slurry as it exits the die is a new apparatus for forming a gypsum wallboard core.

Neither Andersen nor Edwards teach or suggest an apparatus with one or more secondary inlets attached to the extrusion die for the introduction of chemical additives as a fluid or emulsion into the slurry as it exits the die. Edwards does not even discuss an extrusion die for the production of wallboard and while Andersen does discuss a die, it does not teach or suggest an extrusion die with at least one secondary inlet that allows for chemical additives in an emulsion or fluid to be added directly to the gypsum slurry passing through the extrusion die. Andersen describes, teaches and suggests only filament entries 58 that allow for the introduction of filaments into a hydraulically settable mixture being extruded from the die. Such an entry is significantly different from at least one secondary inlet connected directly to an extrusion die that allows for the introduction of chemical additives in the form of emulsions or fluids into a gypsum slurry passing through the die. Andersen makes no suggestion for using the filament

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 11

entries 58 to introduce chemical additives in the form of emulsions or fluids or of how its die would need to be modified or re-engineered in order to allow for the introduction of chemical additives in the form of a fluid or emulsion into a die instead of filaments. The filament entries 58 that allow for the introduction of filaments through a die into a mixture is mechanically different than a secondary inlet that allows for the addition of chemical additives in the form of emulsions or fluids through a die into a gypsum slurry.

Because the combination of the cited references fail to disclose, teach or suggest "at least one secondary inlet connected to and in fluid communication with the extrusion die for the introduction of at least one gypsum slurry additive, which is an emulsion or fluid, directly to the extrusion die, so that the gypsum slurry additive can be added to a gypsum slurry passing through the extrusion die" of amended claim 1, Applicant respectfully submits that the claims are not obvious in view of Andersen or Edwards. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §103(a) be withdrawn. Moreover, Applicant respectfully requests that the rejections of claims 2-6 and 8-10 under 35 U.S.C. §103(a) be withdrawn because each of these claims depend from and incorporate all the limitations of amended claim 1.

B. The Rejection of Claims 11-13 Under 35 U.S.C. §103(a) As Being Obvious Over Andersen in View of Edwards in Further View of Pearson in Further View of Kinkade Should Also Be Withdrawn.

Applicant respectfully submits that the rejections of claims 11-13 under 35 U.S.C. §103(a) are now moot and should be withdrawn because each of these claims depend from amended claim 1, which as discussed above, is not obvious over Andersen in view of Edwards.

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 12

"If an independent claim is not obvious under 35 U.S.C. §103, then any claim depending therefrom is not obvious." MPEP 2143.03 (citing *In re Fine*, 837 F.2d 1382, 1385 (C.C.P.A. 1970)).

C. The Rejection of Claims 17-19 Under 35 U.S.C. §103(a) As Being Obvious Over Nissel in View of Andersen and in Further View of Edwards.

Applicant respectfully submits that the rejections of claims 17-19 under 35 U.S.C. §103(a) are now moot and should be withdrawn because each of these claims depend from amended claim 14, which as discussed above, is not anticipated by or obvious over Nissel. "If an independent claim is not obvious under 35 U.S.C. §103, then any claim depending therefrom is not obvious." MPEP 2143.03 (citing *In re Fine*, 837 F.2d 1382, 1385 (C.C.P.A. 1970)).

Commissioner of Patents
Serial No. 10/707,761
Response Date January 31, 2006
Reply to Office Action dated October 31, 2005
Page 13

CONCLUSION

For all of the foregoing reasons, it is respectfully submitted that claims 1-6 and 8-19 are allowable claims. Allowance of this Application is therefore respectfully requested. In the event Applicant has inadvertently overlooked the need for payment of any fees, Applicant conditionally petitions therefore, and authorize any deficiency to be charged to deposit account 09-0007. When doing so, please reference the above-listed docket number. If there are any other further objections, the Examiner is invited to contact the undersigned to discuss the application.

Respectfully submitted,

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Enclosure: Fax Transmittal Sheet